

What is claimed:

1 1. A method for detecting a communication transfer rate over a network, the  
2 method comprising:  
3 requesting a first communication link connection on the network using a default  
4 transfer rate;  
5 requesting a second communication link connection on the network using a  
6 secondary transfer rate, if the requested first communication link connection at the  
7 default transfer rate is unsuccessful;  
8 monitoring a number of successful communication link connections established  
9 using the secondary transfer rate; and  
10 changing a value of the default transfer rate to a value of the secondary transfer  
11 rate if the number of successful communication link connections at the secondary  
12 transfer rate exceeds a predetermined threshold value.

1 2. The method according to claim 1, wherein the network comprises an integrated  
2 services digital network (ISDN) for communicating digital information.

1 3. The method according to claim 1, wherein the default transfer rate is  
2 approximately 64 Kbps.

1 4. The method according to claim 1, further comprising receiving a failed  
2 connection signal in response to the request for the first communication link connection  
3 indicating that the first communication link connection at the default transfer rate is  
4 unsuccessful.

1 5. The method according to claim 1, wherein the secondary transfer rate is  
2 approximately 56 Kbps.

6. A method of operating communication equipment coupled to a data communication network, the method comprising:

- establishing a plurality of communication links on the data communication network, each one of the communication links comprises:
  - requesting a first data communication link using a default communication transfer rate of 64 Kbps,
  - receiving an indication from the data communication network that the first data communication link was unsuccessful, and
  - requesting a second data communication link using a secondary communication transfer rate of 56 Kbps;
- monitoring a number of successful second data communication link requests using the secondary communication transfer rate;
- changing the default communication transfer rate to 56 Kbps if the number of successful second data communication link requests exceeds a predetermined threshold value; and
- establishing a plurality of subsequent communication links on the data communication network comprising requesting a first data communication link using a default communication transfer rate of 56 Kbps.

1 A method of operating communication equipment coupled to a data  
2 communication network, the method comprising:  
3 establishing a plurality of communication links on the data communication  
4 network, each one of the communication links comprises:  
5 requesting a first data communication link using a default  
6 communication transfer rate of 64 Kbps,  
7 receiving an indication from the data communication network that the  
8 first data communication link was unsuccessful, and  
9 requesting a second data communication link using a secondary  
10 communication transfer rate of 56 Kbps;

11 monitoring a number of unsuccessful first data communication link requests  
12 using the default communication transfer rate;  
13 changing the default communication transfer rate to 56 Kbps if the number of  
14 unsuccessful first data communication link requests exceeds a predetermined threshold  
15 value; and  
16 establishing a plurality of subsequent communication links on the data  
17 communication network comprising requesting a first data communication link using a  
18 default communication transfer rate of 56 Kbps.

1 8. A communication router comprising:  
2 a communication interface which can be coupled to a communication  
3 network to establish a data communication link;  
4 a register circuit coupled to a processor to monitor the number of  
5 successful and/or unsuccessful data communication links; and  
6 the processor initiates data communication links at either a default  
7 communication rate, or a secondary communication rate, and the processor  
8 adjusts a value of the default communication rate in response to the register  
9 circuit.

1 9. The communication router of claim 8 wherein the default communication rate  
2 and the secondary communication rate are selected from the group comprising 64 Kbps  
3 and 56 Kbps.

1 10. The communication router of claim 8 wherein the communication network is an  
2 integrated services digital network (ISDN).

1 11. The communication router of claim 8 wherein the processor adjusts the value of  
2 the default communication rate when a value of the register circuit exceeds a  
3 predetermined threshold value.

1 12. The communication router of claim 8 wherein the register circuit monitors a  
2 number of unsuccessful data communication links attempted using the default  
3 communication rate.

1 13. The communication router of claim 8 wherein the register circuit monitors a  
2 number of successful data communication links attempted using the secondary  
3 communication rate.

1 14. A computer readable medium having a computer program stored thereon for  
2 instructing a computer to perform a method comprising:  
3 requesting a first communication link connection on a network using a default  
4 transfer rate;  
5 requesting a second communication link connection on the network using a  
6 secondary transfer rate, if the requested first communication link connection at the  
7 default transfer rate is unsuccessful;  
8 monitoring a number of successful communication link connections established  
9 using the secondary transfer rate; and  
10 changing a value of the default transfer rate to a value of the secondary transfer  
11 rate if the number of successful communication link connections at the secondary  
12 transfer rate exceeds a predetermined threshold value.

1 15. A computer readable medium having a computer program stored thereon for  
2 instructing a computer to perform a method comprising:  
3 establishing a plurality of communication links on the data communication  
4 network, each one of the communication links comprises:  
5 requesting a first data communication link using a default  
6 communication transfer rate of 64 Kbps,  
7 receiving an indication from the data communication network that the  
8 first data communication link was unsuccessful, and



1 19. The data communication system of claim 16 wherein the maximum data  
2 communication rate of the data communication network is at least 56 Kbps.

1 20. The data communication system of claim 16 wherein the data communication  
2 transmitter has a default communication rate of 64 Kbps when a value of the register  
3 circuit is less than a predetermined threshold value.

1 21. The data communication system of claim 16 wherein the data communication  
2 transmitter adjusts the value of the default communication rate from 64 Kbps to 56  
3 Kbps in response to the register circuit.

1 22. A method of operating a communication network, the method comprising:  
2 requesting a first communication link connection on the network using a first  
3 communication device;  
4 initiating a callback operation using a second communication device, the  
5 callback operation is initiated following a callback delay; and  
6 adjusting a value of the callback delay if the callback operation is unsuccessful.

1 23. The method of claim 22 wherein the value of the callback delay is incremented  
2 when the callback operation is unsuccessful.

1 24. The method of claim 22 wherein the value of the callback delay is not  
2 incremented when the callback operation is unsuccessful, and the unsuccessful callback  
3 operation is assumed to not be the result of the first communication device being busy.

1 25. The method of claim 22 wherein the communication network is an ISDN and the  
2 first and second communication devices are communication routers.

1 26. The method of claim 22 wherein the value of the callback delay is incremented  
2 when a number of consecutive unsuccessful callback operations exceeds a  
3 predetermined threshold value.

1 27. A communication router comprising:  
2 a communication interface which can be coupled to a communication  
3 network to establish a callback operation to a communication device provided  
4 on the communication network; and  
5 a processor to determine a callback delay time based upon operating  
6 characteristics of the network.

1 28. The communication router of claim 27 further comprising a register for storing a  
2 value of the callback delay time.

1 29. The communication router of claim 27 wherein the processor determines the  
2 callback delay time based upon success of callback operations.

1 30. A data device comprising:  
2 a communication interface which can be coupled to a communication  
3 network to establish a callback operation, by responding, requesting, initiating, and  
4 accepting signals, to and from a communication device provided on the communication  
5 network; and  
6 a processor to determine a callback delay time based upon operating  
7 characteristics of the network; and  
8 a communication switch serving the data device.

1 31. The data device of claim 30 further comprising a register for storing a value of  
2 the callback delay time.

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